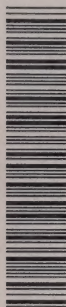
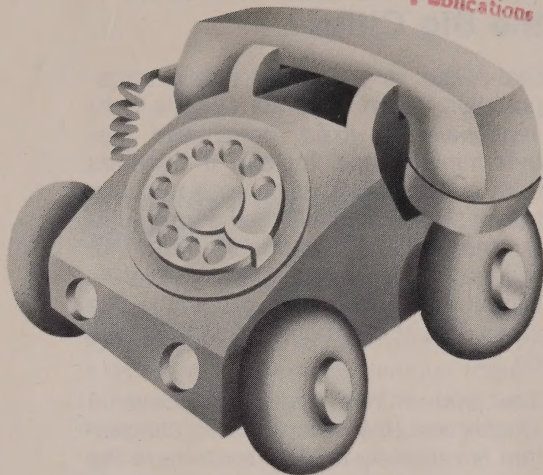


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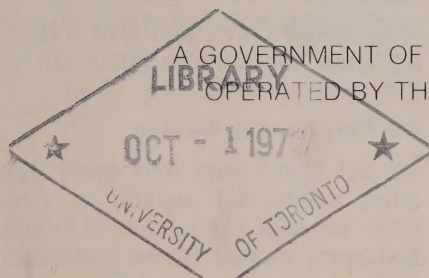
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# GO DIAL A BUS

THE METROPOLITAN TORONTO EXPERIMENT



A GOVERNMENT OF ONTARIO DEMONSTRATION PROJECT  
OPERATED BY THE TORONTO TRANSIT COMMISSION

[General publications]  
[G-5]



Ontario

Ministry of Transportation and Communications

Hon. William G. Davis, Q.C.  
Premier

Hon. Gordon Carton, Q.C.  
Minister

A.T.C. McNab  
Deputy Minister

## Will Dial-A-Bus Work In the Big Cities?

Dial-A-Bus is a form of public transportation which does not operate conventionally on fixed routes with pre-determined stops. Instead it operates from a fixed point, such as a mainline transit station, into a limited area, usually residential. Passengers are not required to board and leave the Dial-A-Bus at conventional bus stops; the bus stops right at their homes *if requested to do so*.

The system has been a success in smaller centres where traffic congestion is relatively mild — and where the people's daily travel patterns are not too complex.

But large metropolitan areas present a quite different set of problems. We don't yet know that Dial-A-Bus will work in big cities.

## Let's Check It Out

The Government of Ontario and Toronto Transit Commission have made exhaustive studies of the situation and believe Dial-A-Bus can bring public transportation to many people not now adequately served by regular subway, streetcar and bus lines.

They believe, too, that Dial-A-Bus will persuade many more people to leave their cars at home.

But they have to be sure.

To put Dial-A-Bus into every appropriate residential section of Ontario cities will take a great deal of money — taxpayers' money. So we had better be sure.

That's why the Government of Ontario is financing the GO • DIAL A BUS test operations in Metropolitan Toronto.

# THE FEEDER SERVICE

The principal demand for Dial-A-Bus is to help people make the daily trip to and from work.

Metro Toronto is blessed with perhaps the best public transit system of any large city in North America. We know that from what visitors tell us; we know it because patronage is on the increase in Toronto — transit usage in most other major cities is on the decline.

But Toronto's transit grid cannot run down every street in Metro. Inevitably some citizens live beyond comfortable walking distance to the fixed-route subway or surface lines. Today these people generally resort to the private car — a most costly, inefficient, irrational, *but convenient* way to commute.

If Dial-A-Bus is to succeed it must be able to get these daily commuters to and from fixed route services, with something approaching the convenience of the private car; and do it at lower cost.

## Four Metro Feeder Services

In the GO • DIAL A BUS demonstration, four “collection” areas have been selected in Metropolitan Toronto. Each is typical of a different commuter transit requirement relative to the principal destination: the downtown core. Each feeds — directly or indirectly — the Yonge Street subway at York Mills Station.

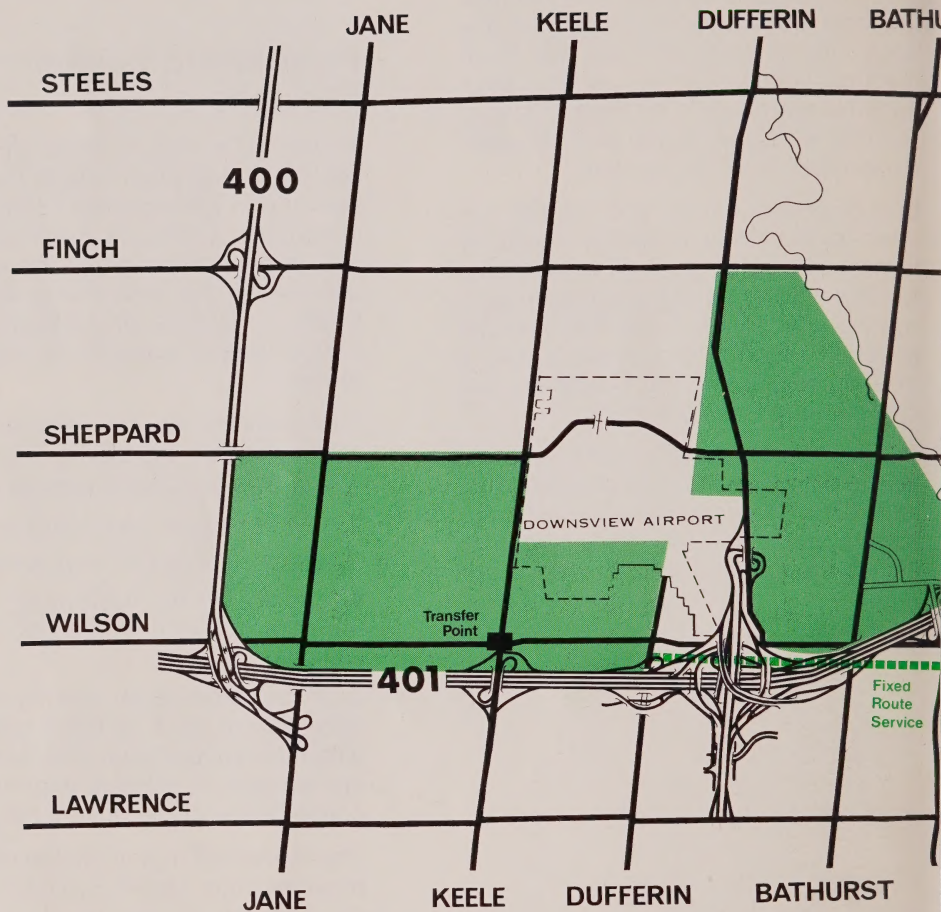
The diagram on the following page shows the four situations:

1. Adjacent to mainline station.
2. Short haul by Dial-A-Bus to station.
3. Long haul by Dial-A-Bus to station.
4. Adjacent to fixed-route surface transit which in turn feeds the mainline station.

It is apparent that downtown commuters from each of these areas face different transportation problems — and are tempted to different degrees by the convenience of the private car.

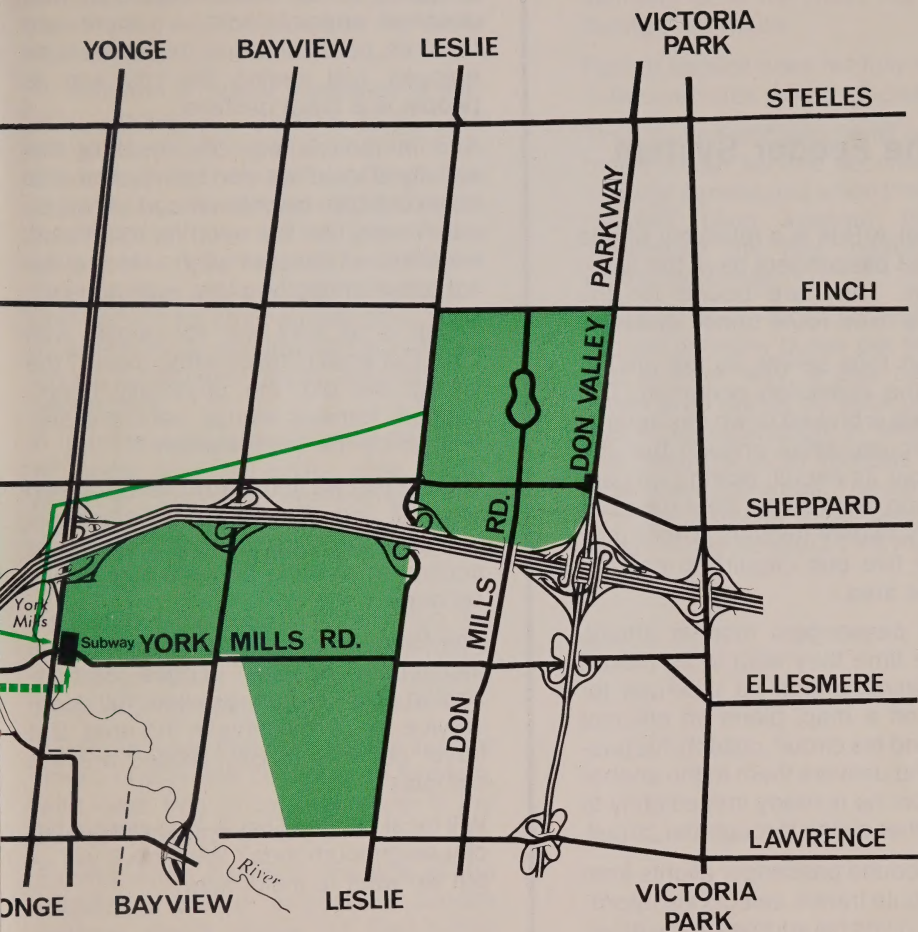
The Government demonstration should prove whether Dial-A-Bus can meet the requirements of any, or all, of the four areas.





**Areas Receiving**

# A BUS



Feeder Service

## How the Feeder System Works

Feeder Dial-A-Bus is a relatively simple concept: all passengers have the same destination. They are bound for the station of a fixed-route transit system.

The station thus serves as the anchor point for the collection operation. The service area is broken down into several vehicle circuits, small enough that the bus can tour its circuit, picking up passengers, and return to the station anchor point every twenty minutes. There may be four or five bus circuits to cover a Dial-A-Bus area.

Outbound passengers reserve ahead, stating the time they wish to be picked up. The driver charts all pick-ups for each trip on a map, plans an efficient route around his circuit, collects his passengers and delivers them to the anchor point station; he is ready immediately to make another swing through the circuit.

The homebound passenger alights from the fixed-route transit, selects the appropriate bus, gives his address to the driver and is delivered to his home.

## THE LOCAL SERVICE

Mobility in a big city means more than just getting to work and back. There's shopping to be done, friends to visit, doctor's appointments — there are theatres, parks, libraries, museums to be enjoyed; just seeing the city and its people is a great pastime.

And in today's big city, much of this activity is local: we don't always have to leave our own neighbourhood to participate in city life. But even for local trips, we still need transportation — look at the suburban shopping plaza parking lots.

Which is all very well for people with cars. But what of those without cars? the young, the old, the physically handicapped, families whose cars are pre-empted by the breadwinners?

Once again we find many people denied the full benefits of city amenities because they live beyond convenient access to existing conventional transit services.

The Government of Ontario Dial-A-Bus experiment at Bay Ridges demonstrated that it can provide full local service to all residents in the area. But travel patterns in Bay Ridges are not complex.

Will local service Dial-A-Bus work in big city neighbourhoods? We think it will — but we want to make sure.



## How the Local System Works

Local Dial-A-Bus can be a bit more complex than feeder service since all passengers are not bound for the same destination.

To maintain a regular frequency of service, individual buses again are assigned specific service boundaries — this time to permit a pick-up/discharge cycle of, say, 30 minutes, depending on the distance to the anchor point. A bus cannot take you beyond its particular boundaries — not and maintain acceptable service for other passengers. Thus, a passenger whose trip cuts across bus circuit boundaries must transfer to a second bus.

A transfer point is established on which all buses of a Dial-A-Bus area will be anchored. In this way, a passenger need make one transfer at most to travel between any two points in the Dial-A-Bus area.

To minimize the need for transferring, the anchor point selected is itself a major traffic generator such as a shopping plaza or fixed-route transit station.

It can be seen that during local service hours, Dial-A-Bus continues to function, with lower frequency, as a feeder to the conventional transit lines.

Except when boarding the bus at the transfer or anchor point, local service patrons would phone for Dial-A-Bus pick-up at least an hour in advance.

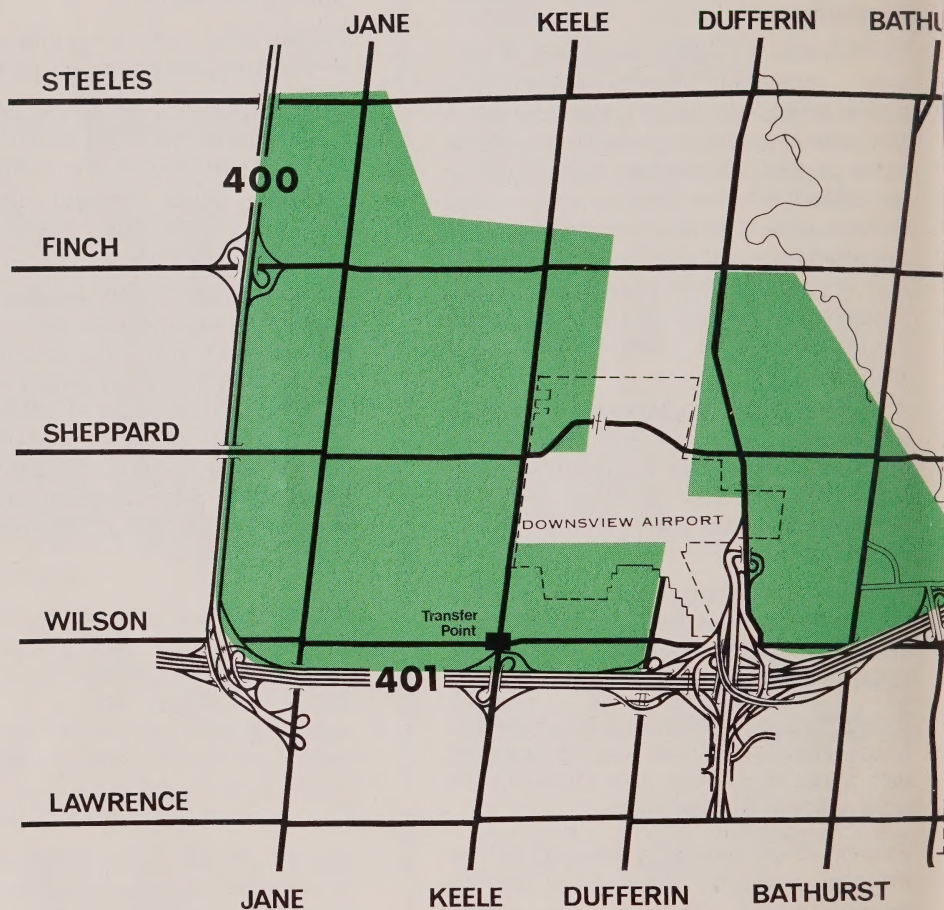
## The Timing Is Right

Local transportation services for personal business, recreation and entertainment is, in the main, not called for during rush hours.

Feeder service does not fully utilize Dial-A-Bus vehicles during off-peak periods.

Thus, buses and personnel of the commuter feeder service become available for local service just when they are most needed. (And keeping them busy throughout the day makes a lot of economic sense.)

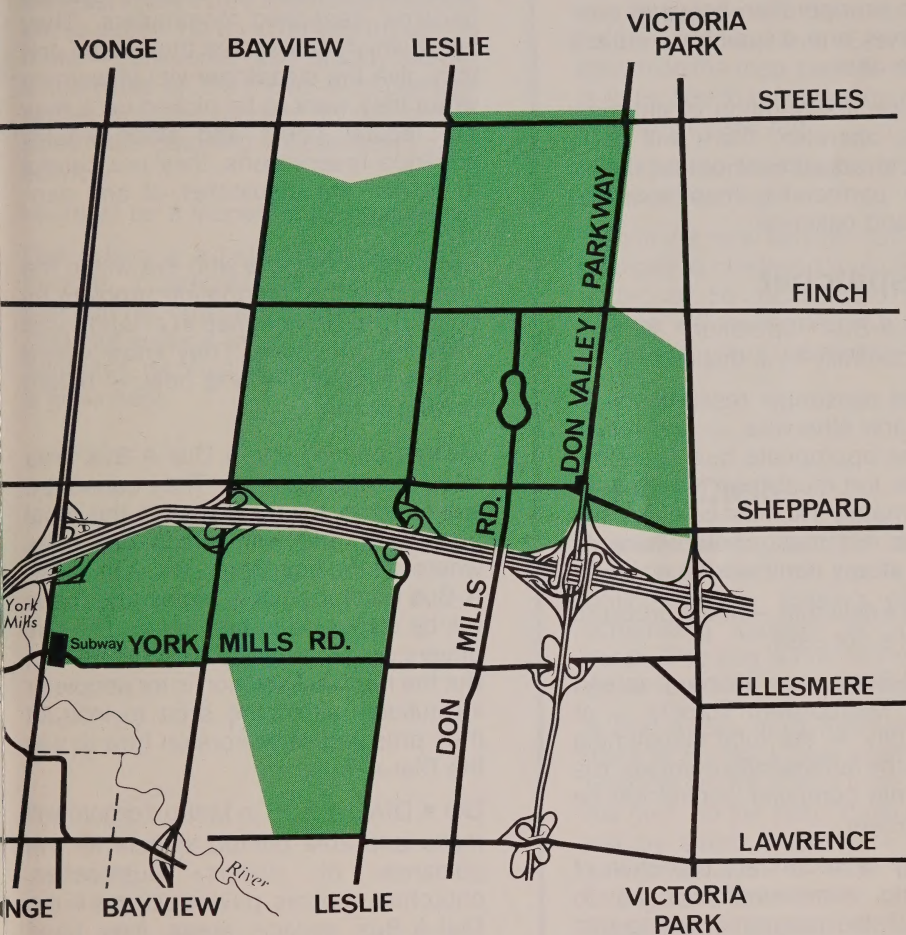
Another point: local service does not require as many buses per square mile. Put another way, a bus can serve a larger area during off-peak periods. The GO • Demonstration, in Metro Toronto will need 25 to 30 vehicles for its four feeder service areas. The same fleet will provide off-peak local service to four areas — to just about 75% more people.



**Areas Receiving**



# A BUS



Local Service

## THE PEOPLE INVOLVED

Dial-A-Bus, particularly local service Dial-A-Bus, is trickier to use than conventional transit. Smooth operations depend on co-operation between passenger, driver and dispatcher — it's a partnership deal.

And with the inauguration of any new Dial-A-Bus operation there will be a learning and adjustment period during which the partnership must exercise tolerance and patience.

### The Dispatcher

The Dial-A-Bus operation is co-ordinated centrally by a dispatcher.

He receives passenger reservations — by phone and otherwise — and relays these to the appropriate bus operators by radio. He, too, must know his city geography intimately. He must be quick and unflappable. He must know where all buses are at any particular time.

He must be a diplomat — under pressure — and that's not easy.

If Dial-A-Bus operations spread throughout Metropolitan Toronto — or any large city — the total dispatching could become fantastically complex. It is expected that computer control will be the only answer.

Accordingly, a secondary objective of the Toronto experiment will be to develop suitable programs and to test them in actual dispatch operations.

## The Passenger

People living within the Dial-A-Bus service area and using it to get to and from the mainline station, quickly become seasoned commuters. They know which bus serves their home and they give the dispatcher lots of warning when they want to be picked up. If they are regular riders and place weekly advance reservations, they are careful to advise the dispatcher of any cancellations.

Local service riders who live within the area solve the information problem by posting the service map in a handy spot near the telephone. They know where they are going — and how — before leaving home.

Visitors coming into a Dial-A-Bus area need special attention. They cannot be expected to be familiar with the local geography and with which bus goes where. At the boarding point — the Dial-A-Bus anchor point — signs and maps will be displayed to help them. The bus drivers will be happy to direct them, too. But the happiest solution is for people or institutions within the area to instruct their prospective visitors on how to use the Dial-A-Bus.

GO • DIAL A BUS in Metro Toronto will make available printed leaflets for the guidance of visitors. Businesses, churches, schools, private citizens in the Dial-A-Bus service areas may have these for distribution.

## The Operator

The man behind the wheel of the Dial-A-Bus has to be much more than a driver.

He must know every street and crescent on his circuit. He must be able to plan his route — efficiently and quickly, sometimes while on the move. With perhaps twelve pick-ups ordered on one circuit, good route planning is essential to good service.

He must be a trained radio operator.

Dial-A-Bus is a highly personal transit service. Customer satisfaction is a function not only of good service but of pleasant service. In addition to his other attributes, he must be personable — and, a good host.

## THE FARE STRUCTURE

In general the fare for all users of Dial-A-Bus feeder service in the Toronto demonstration will be 40¢ one way. The one exception will be in the long-haul feeder collection area (East Willowdale) shown on the map, page 5. Here the fare is to be 50¢ to compensate for the substantially longer trip.

In all local service areas the adult fare is set at 40 cents.

Also in the local service, half-fare will be charged to children 12 years of age and under, or 58 inches and shorter. No charge will be made for a single child under two years, carried by an adult.

## Exact Cash

A great delaying factor in public transit service is the time spent by drivers selling tickets, making change and scrutinizing passes or identification cards. The bus is not moving when the driver functions as ticket agent.

A Dial-A-Bus must maintain schedule; there is no slack built in which permits time lost on one circuit to be made up on the next. So the exact cash fare system will be used. Passengers train themselves always to have the correct change available to drop in the fare box. Tickets are not sold. Drivers do not make change.



It sounds a bit severe — a serious inconvenience for passengers. But in practice it quickly becomes acceptable to the public. It is used in a number of larger North American cities and is working satisfactorily here in Ontario in Oakville and Sudbury.

## Transfer Privileges

Dial-A-Bus is an added, premium service, not part of the TTC's regular single-fare system which takes you anywhere in Metro for the one ticket. As such, separate fares are charged when passengers transfer between Dial-A-Bus and TTC fixed-route services.

However, Dial-A-Bus to Dial-A-Bus transfer does not cost a second fare *within a local service area*. Thus travel within, say, the Downsview local service area will cost 40¢ even if the trip calls for a transfer.

## Special Fares

Most municipal transit systems provide for reduced rates for senior citizens and students. Others offer books of tickets at a discount; sell monthly passes; charge a reduced fare at off-peak hours. These are all sound pricing policies.

Unfortunately they are also complications.

On the principle that we must learn to walk before we run, the GO • DIAL A BUS experiment is being kept as simple and basic as possible. Special fares will not be introduced initially.

## THE VEHICLE

To date the Dial-A-Bus concept has been tested and demonstrated using conventional buses or adaptations of existing vans and light trucks. These have done a reasonable job but are not really suited to the work.

In Dial-A-Bus service a vehicle must meet quite different standards than those for conventional bus service. Operating on residential streets it must have greater manoeuvrability, be less massive visually and run quietly. It must not cloud the air with exhaust smoke nor pound potholes in pavement.

In addition it must be attractive and comfortable to lure motorists away from their cars.

But it has got to do and be all these things at a reasonable price.

Such a vehicle does not exist today. It's not that it couldn't be built, it is simply that a market for the product has not existed. Industry has understandably not seen fit to make the substantial investment in research and development.

Led by Ontario, Dial-A-Bus popularity is growing internationally. The potential market can be seen, and Canadian industry is reacting. The Ontario Transportation Development Corporation, a special act company of the Government of Ontario, will co-ordinate the research to ensure that a suitable small bus is developed and that Canadians build it.

## **Stage I — The Club Car**

The decision to proceed with GO • DIAL A BUS in Metropolitan Toronto was taken by the Toronto Transit Commission and the Ministry of Transportation and Communications on March 29, 1973. The first phase of operations is to commence by early November the same year. That is seven months lead time — not really enough to design, prove and manufacture completely new vehicles.

But chassis and engines did have to be purchased, and bus bodies built for them. There was time to design and implement some improvements. Engineers from the Ministry's GO Transit Branch, in consultation with the TTC, developed The Club Car.

Twenty-seven of them are on order and they will be tested and perhaps modified during the three-year period of the demonstration. The Club Car features contoured seating arranged around the perimeter of the vehicle. There will be indirect lighting, under-the-seat heating, snap-on upholstery for sudden replacement when necessary, and a picture window view for passengers.

The unique, all-fibreglass moulded body is being manufactured by Rek Vee Industries Limited of Scarborough; seating and interior fittings by Funcraft Industries Limited of Cambridge, Ontario. The vehicle uses a conventional Dodge motor home chassis.

## **Stage II — Electrically Driven Buses Wheelchair Capability**

In the planning stages now, but due for production and testing during the GO • DIAL A BUS demonstration are two further vehicle types.

Battery-powered vehicles are certainly not new but their limitations in the areas of power, speed and range of operation has circumscribed their widespread acceptance for private and public transportation. There could, however, be a good potential for them in Dial-A-Bus service.

The Dial-A-Bus seldom ranges farther from its station than 15 or 20 minutes will take it. It does not operate on intercity highways and will not normally have to compete with 70-mile-an-hour traffic. Certainly on its residential travels it will not require drag-strip power and acceleration. The possibilities will be investigated.

The portal-to-portal nature of Dial-A-Bus service will be a boon to people who, for any reason, have trouble walking. In that sense it is a first effort to make public transportation available to shut-ins and the physically handicapped. But people confined to wheelchairs are still badly neglected.

The Government of Ontario is evaluating several designs of buses which could accommodate wheelchair

passengers. These are still in the concept stage but it is hoped that one will be found to have sufficient potential to justify production of a prototype for testing during the GO • Dial-A-Bus demonstration in Toronto.

As a temporary measure, and to permit early testing of the demand for wheelchair service, it is planned to have some of The Club Cars modified. Wider doors and a hydraulic lift arrangement would permit loading of passenger and wheelchair. Inside would be room for two wheelchairs and appropriate, secure tethering arrangements.

Operating techniques will also have to be developed so that the special buses can be integrated into the regular Dial-A-Bus service.

## THE CLUB CAR

**Model:** RekVee Club Car

**Length:** 24 feet

**Width:** 96 inches

**Height:** 106 inches

**Wheelbase:** 159 inches

**Turning radius:** 30 feet

**Body construction:** Rigidly reinforced fiberglass sandwich with moulded urethane foam insulation.

**Seating capacity:** 17

**Heating:** Ducted warm air

**Lighting:** Indirect fluorescent

**Upholstery:** Moulded foam with vinyl & cloth cover. Snap on/off for cleaning and replacement

**Engine:** Chrysler 440 cu. in. gasoline

**Transmission:** Automatic

Body manufactured by RekVee Industries Limited, 121 Howden Ave., Scarborough, Ont.

Interior by Funcraft Vehicles Limited, Cambridge (Galt), Ont.

Chassis by Dodge — Model RM 350





